

Notice of Allowability

Application No.

10/041,040

Examiner

Esaw T. Abraham

Applicant(s)

SOLOMON ET AL.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt after final filed 08/08/06.
2. ☒ The allowed claim(s) is/are 1-4, 7-10, 13, 17, 18-21 and 24 (renumbered as 1-15).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

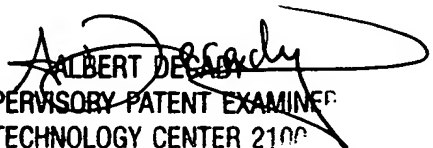
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

Examiner's statement for reason for allowance

1. Claims 1-4, 7-10, 13, 17-21 and 24 have been allowed.

The following is an examiner's statement for allowance:

As per claim 1:

The prior art of record, Doiron (U.S. PN: 5,968,197) in figure 1 teaches or discloses a data communications network which includes a sending unit (12) for sending packets of data over a network bus (16) to a receiving unit (14) whereby both units include transceivers (24) and (30) for communicating packet information over the network bus 16. Doiron, further teaches an automatic repeat request (ARQ) protocol is employed between sender and receiver so that when a data unit is received correctly by the receiving unit, the receiving unit transmits an acknowledgment (ACK) back to the sending unit and if the data unit is received incorrectly (unsuccessfully) and cannot be correctly reconstructed, the receiving unit transmits a negative acknowledgment (NAK) to the sending unit (see col. 4, last paragraph and figure 2 steps 40-44). Doiron does not explicitly teach a transmitting device that does not expect a completion acknowledgment for a request transaction. Dunning et al. (U.S. PN: 6,760,307) teach that a system implements flow control between two endpoints 1, 2 which will yield better bandwidths for link efficiency than a traditional credit based flow control--a credit base scheme stops sending packets when all credits are used up, and transmission cannot resume until additional credits are received and further the system continues sending data until the receiver sends a NAK, at which time the transmitter restarts at the point at which the receiver indicated the NAK (see col. 5, lines 21-41) which is basically the same method as the applicant's claim because the

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system of Dunning sends packets without expecting any acknowledgment until the receiver sends a NAK. However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a general input/output port to implement a communication stack including a physical layer, a data link layer and a transaction layer, the transaction layer to disassemble on-the-point a packet for a request transaction from a transmitting device on the point to point communication link that does not expect a completion packet for the request transaction, wherein; a message is sent to the transmitting device if the request transaction is unsuccessful. Consequently, claim 1 is allowed over the prior art.

Claims 2-4, which is/are directly or indirectly dependent/s of claim 1 are also allowable over the prior art of record.

As per claim 7:

The prior art of record, Doiron (U.S. PN: 5,968,197) in figure 1 teaches or discloses a data communications network which includes a sending unit (12) for sending packets of data over a network bus (16) to a receiving unit (14) whereby both units include transceivers (24) and (30) for communicating packet information over the network bus 16. Doiron, further teaches an automatic repeat request (ARQ) protocol is employed between sender and receiver so that when a data unit is received correctly by the receiving unit, the receiving unit transmits an acknowledgment (ACK) back to the sending unit and if the data unit is received incorrectly (unsuccessfully) and cannot be correctly reconstructed, the receiving unit transmits a negative acknowledgment (NAK) to the sending unit (see col. 4, last paragraph and figure 2 steps 40-44). Doiron does not explicitly teach a transmitting device that does not expect a completion acknowledgment for a request transaction. Dunning et al. (U.S. PN: 6,760,307) teach that a

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system implements flow control between two endpoints 1, 2 which will yield better bandwidths for link efficiency than a traditional credit based flow control--a credit base scheme stops sending packets when all credits are used up, and transmission cannot resume until additional credits are received and further the system continues sending data until the receiver sends a NAK, at which time the transmitter restarts at the point at which the receiver indicated the NAK (see col. 5, lines 21-41) which is basically the same method as the applicant's claim because the system of Dunning sends packets without expecting any acknowledgment until the receiver sends a NAK. However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a transmitting device to transmit a packet for a request transaction, the packet to be transmitted on a point-to-point communication link the transmitting device does to not expect a completion packet for the request transaction; and a receiving device to receive the packet for the request transaction on the point-to-point communication link, the receiving device to include a general input/output port to implement a communication stack including a physical layer, a data link layer and a transaction layer, the transaction layer to disassemble the packet for the request transaction, and wherein the receiving device is to return a message to the transmitting device if the request transaction is unsuccessful. Consequently, claim 7 is allowed over the prior art.

Claims 8-10, which is/are directly or indirectly dependent/s of claim 7 are also allowable over the prior art of record.

As per claim 13:

The prior art of record, Doiron (U.S. PN: 5,968,197) in figure 1 teaches or discloses a data communications network which includes a sending unit (12) for sending packets of data

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over a network bus (16) to a receiving unit (14) whereby both units include transceivers (24) and (30) for communicating packet information over the network bus 16. Doiron, further teaches an automatic repeat request (ARQ) protocol is employed between sender and receiver so that when a data unit is received correctly by the receiving unit, the receiving unit transmits an acknowledgment (ACK) back to the sending unit and if the data unit is received incorrectly (unsuccessfully) and cannot be correctly reconstructed, the receiving unit transmits a negative acknowledgment (NAK) to the sending unit (see col. 4, last paragraph and figure 2 steps 40-44). Doiron does not explicitly teach a transmitting device that does not expect a completion acknowledgment for a request transaction. Dunning et al. (U.S. PN: 6,760,307) teach that a system implements flow control between two endpoints 1, 2 which will yield better bandwidths for link efficiency than a traditional credit based flow control--a credit base scheme stops sending packets when all credits are used up, and transmission cannot resume until additional credits are received and further the system continues sending data until the receiver sends a NAK, at which time the transmitter restarts at the point at which the receiver indicated the NAK (see col. 5, lines 21-41) which is basically the same method as the applicant's claim because the system of Dunning sends packets without expecting any acknowledgment until the receiver sends a NAK. However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious receiving at a general input/output port for a completing device a packet the received for a request transaction, from a transmitting device that does not expect a completion packet for the request transaction implementing a communication stack at the general input/output port for the completing device, the communication stack including a physical layer, a data link laver and a transaction laver, the transaction laver to disassemble the packet for the

request transaction; determining whether an error condition associated with completion of the request transaction exists; and if an error condition exists, delivering an error message to the transmitting device. Consequently, claim 13 is allowed over the prior art.

Claim 17, which is/are directly or indirectly dependent/s of claim 13 is also allowable over the prior art of record.

As per claim 18:

The prior art of record, Doiron (U.S. PN: 5,968,197) in figure 1 teaches or discloses a data communications network which includes a sending unit (12) for sending packets of data over a network bus (16) to a receiving unit (14) whereby both units include transceivers (24) and (30) for communicating packet information over the network bus 16. Doiron, further teaches an automatic repeat request (ARQ) protocol is employed between sender and receiver so that when a data unit is received correctly by the receiving unit, the receiving unit transmits an acknowledgment (ACK) back to the sending unit and if the data unit is received incorrectly (unsuccessfully) and cannot be correctly reconstructed, the receiving unit transmits a negative acknowledgment (NAK) to the sending unit (see col. 4, last paragraph and figure 2 steps 40-44). Doiron does not explicitly teach a transmitting device that does not expect a completion acknowledgment for a request transaction. Dunning et al. (U.S. PN: 6,760,307) teach that a system implements flow control between two endpoints 1, 2 which will yield better bandwidths for link efficiency than a traditional credit based flow control--a credit base scheme stops sending packets when all credits are used up, and transmission cannot resume until additional credits are received and further the system continues sending data until the receiver sends a NAK, at which time the transmitter restarts at the point at which the receiver indicated the NAK

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(see col. 5, lines 21-41) which is basically the same method as the applicant's claim because the system of Dunning sends packets without expecting any acknowledgment until the receiver sends a NAK. However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a requesting device to transmit a packet for a memory transaction over the one or more point-to-point communication links, the requesting device to not expect a completion packet for the memory transaction; and a completing device to receive the packet for the memory transaction, the completing device to include a general input/output port to implement a communication stack including a physical layer, a data link layer and a transaction layer, the transaction layer to disassemble the packet for the memory transaction, and wherein the completion device is to return a message over the one or more point-to-point communication links to the requesting device if the memory transaction is unsuccessful. Consequently, claim 18 is allowed over the prior art.

Claims **19-21 and 24**, which is/are directly or indirectly dependent/s of claim 18 are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

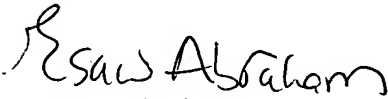
Conclusion

2. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

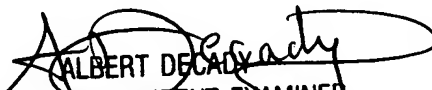
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If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned (571) 273-8300.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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